

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF THE CLAIMS:

1. (Previously Presented) A bipolar transistor comprising:

a substrate,

an insulating layer over said substrate,

a first single crystal semiconductor layer positioned over said insulating layer having a lightly doped region of a first type and at least one contiguous heavily doped region of said first type, said lightly doped region and said at least one contiguous heavily doped region functioning as a collector, wherein said lightly doped region is directly underneath a base,

a second patterned semiconductor layer of a second type formed over said lightly doped region of said first semiconductor layer to function as the base, and

a third patterned semiconductor layer of said first type positioned over said second semiconductor layer to function as an emitter,

said lightly doped region of said first type having a dopant concentration to fully deplete of mobile charge through said first semiconductor layer to said insulating layer, wherein said doping concentration of said lightly doped region has a lowest doping concentration of said collector.

2. (Original) A bipolar transistor of claim 1 wherein said first single crystal semiconductor layer has a thickness in the range from 30 to 1000 nanometers.

3-4 (Canceled)

5. (Original) A bipolar transistor of claim 1 wherein said second patterned semiconductor layer is a silicon-germanium alloy.

Claims 6-22 (Canceled)